

Technical Information

Pantothenate Culture Agar

Product Code: DM 1135

Application: Pantothenate Culture Agar is recommended for culturing *Lactobacillus plantarum* ATCC 8014 used in the microbiological assay of pantothenic acid or its salts.

Composition**

Ingredients	Gms / Litre
Yeast extract	20.000
Dextrose	5.000
Sodium acetate	5.000
Agar	15.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Pantothenate Culture Agar prepared according to US Pharmacopoeia ⁽¹⁾ is recommended for culturing *Lactobacillus plantarum* ATCC 8014 used in the microbiological assay of pantothenate.

This medium contains all the necessary nutrients except pantothenate which is required for the growth of an auxotrophic strain *L. plantarum*. ATCC 8014 Growth of *L. plantarum* ATCC 8014 proportionate is to the concentration of pantothenate in the medium. Therefore from the standard linear curve, concentration of pantothenate from unknown sample can be estimated.

Yeast extract and dextrose supply nitrogen and carbon for the growth of the organism. Sodium acetate inhibits the growth of some organisms including gram-negative bacteria and moulds.

The culture to be used in the assay is inoculated into tubes of Pantothenate Culture Agar and incubated at 35-37°C for 16-24 hours. These cultures are then maintained at 2-10°C for not more than a week. Fresh cultures should be made after every week. The inoculum is prepared by transferring culture from Pantothenate Culture Agar into 10 ml of sterile single strength Pantothenate Assay Medium (DM1037).

Methodology

Suspend 45 grams of powder media in 1000 ml distilled water. Shake well and heat to dissolve the medium completely. Distribute in tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in an upright position.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent gel forms in tubes as butts

Reaction

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH Range 6.60-7.00

Cultural Response/ characteristics

DM 1135: Cultural characteristics observed after an incubation at 35 - 37°C for 16 - 24 hours.

Organism

Lactobacillus plantarum ATCC 8014

Inoculum (CFU)

50-100

Growth

good-luxuriant



Dehydrated Culture Media
Bases / Media Supplements

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. United States Pharmacopoeia, National Formulary, 1985, 21st rev., USP Convention, Inc., Rockville, MD.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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